

## REMARKS

Claims 1, 6, 11 and 16 are amended. Claims 75-86 are added. Claims 1, 4-6, 9-11, 14-16, 19, 20 and 65-86 are in the application for consideration.

Each of the independent claims is amended to recite that the etchant gas composition includes at least one of  $C_4F_6$ ,  $C_3F_6$  and  $C_5F_8$ . Support for the same is inherent in Applicant's application as-filed, for example at p.2, ln.5. Dependent claims 75-86 are added to separately claim each of the three stated materials.

All of the independent claims in the application have been amended to recite a boron and/or phosphorus doped silicon dioxide selective to undoped  $SiO_2$  and  $Si_3N_4$  etchant gas composition. Such is clearly supported by Applicant's application as-filed.

Independent claim 1 stands rejected as being obvious over a combination of Chu et al. and Kuehne et al. Chu et al. is understood to teach an etchant gas composition for selectively etching BPSG relative to  $TiSi_2$ . However, independent claim 1 is amended to recite an etchant gas composition for etching a boron and/or phosphorus doped silicon dioxide selective relative to undoped  $SiO_2$  and  $Si_3N_4$ .  $TiSi_2$  is neither  $SiO_2$  nor  $Si_3N_4$ . Therefore, the Chu et al. patent is not material to Applicant's independent claim 1 as amended. Accordingly, the combined rejection with Kuehne et al. is improper for at least this reason, and the rejection should be withdrawn. Further, Chu et al. in no way discloses Applicant's claimed etchant gas composition having at least one of  $C_4F_6$ ,  $C_3F_6$  and  $C_5F_8$ .

Kuehne et al. is relied upon as disclosing an etchant gas composition comprising  $\text{CH}_2\text{F}_2$  and  $\text{C}_4\text{F}_6$ . It is noted that Kuehne et al. also discloses  $\text{C}_5\text{F}_8$  as a substitute for  $\text{C}_4\text{F}_6$ . However, the etch teaching of Kuehne et al. is relative to etching its silicon dioxide materials 148, 248, 448 and 548. However, such materials are taught to be oxide deposited by decomposition of tetraethylorthosilicate (TEOS) deposited using HDPCVD (col.2, Ins.9-12). But, such a material is NOT boron and/or phosphorus doped silicon dioxide, and in fact, is undoped silicon dioxide. Accordingly, any teaching from the Kuehne et al. process is only material to etchant compositions for etching undoped silicon dioxide. On the other hand, Applicant's composition is relative to etching doped selective to undoped silicon dioxide, essentially stating not etching the very material which Kuehne et al. says is etched using its composition. Thus, Kuehne et al. teaches the exact opposite of that which Applicant recites, and its teachings are not material to etchant compositions for etching doped silicon dioxide. Accordingly, such would not be properly combined with Chu et al. in a rejection of Applicant's amended claim 1, and even if so done, does not suggest or render obvious Applicant's amended independent claim 1.

For at least these reasons, Applicant's amended independent claim 1 is allowable over Chu et al. in view of Kuehne et al., and action to that end is requested.

Applicant's independent claims 6, 11 and 16 also stand rejected as being obvious over a combination of Chu et al. and Kuehne et al. Such claims should be allowed for the same essential reasons argued above with respect to

independent claim 1, namely that Kuehne et al. discloses etchant compositions for etching of undoped silicon dioxide wherein Applicant's composition is relative to etching doped selective to the very material which Kuehne et al. says to etch with its composition. Accordingly, independent claims 6, 11 and 16 should be allowed, and action to that end is requested.

It is observed that the newly applied '109 Kim et al. patent only and specifically teaches etch compositions which are etching silicon nitride and doped silicon dioxide and undoped silicon dioxide at the same time.

Applicant's dependent claims should be allowed as depending from allowable base claims, and for their own recited features which are neither shown nor suggested in the cited art. Action to that end is requested.

This application is believed to be in immediate condition for allowance, and action to that end is requested

Respectfully submitted,

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